

AMENDMENTS TO THE CLAIMS

Please add new claims 80-100, so the status of claims 37-52 and 74-100 (claims 1-36 and 53-73 were previously canceled) that are pending in the above-identified application is as follows:

1. to 36. (Canceled)

37. (Original) A method of forming an impact absorbing composite, the method comprising:
placing a flexible layer into a molding apparatus, the molding apparatus having a plurality of first surfaces that define a plurality of first mold cavity portions and a second surface that defines a second mold cavity portion and, the flexible layer positioned between the first mold cavity portions and the second mold cavity portion, and the first mold cavity portions and the second mold cavity portion collectively forming a mold cavity;
placing polymeric resin in the mold cavity;
expanding the polymeric resin in the mold cavity to form an impact absorbing composite intermediate, the impact absorbing composite intermediate comprising expanded polymeric resin and the flexible layer; and
finishing the impact absorbing composite intermediate to form the impact absorbing composite.

38. (Original) The method of claim 37 wherein:
placing polymeric resin in the mold cavity comprises placing the polymeric resin in the first mold cavity portions and the second mold cavity portion; and
expanding the polymeric resin in the mold cavity comprises expanding the polymeric resin in the first mold cavity portions and expanding the polymeric resin in the second mold cavity portion.

39. (Original) The method of claim 38 wherein:
the flexible layer has a first major surface and a second major surface that are located on opposing sides of the flexible layer and has internal surfaces that define a plurality of holes that extend through the flexible layer from the first major surface to the second major surface; and

placing polymeric resin in the mold cavity comprises placing the polymeric resin in the second mold cavity portion and allowing the polymeric resin to pass through the holes of the flexible layer and into the first mold cavity portions.

40. (Original) The method of claim 38 wherein the flexible layer has internal surfaces that define a plurality of holes in the flexible layer, the method further comprising securing the expanded polymeric resin within the holes of the flexible layer.

41. (Original) The method of claim 40 wherein:

the flexible layer has a first major surface and a second major surface, the first major surface and the second major surface located on opposing sides of the flexible layer; and the holes of the flexible layer extend through the first major surface, through the second major surface, or through both the first major surface and the second major surface.

42. (Original) The method of claim 37 wherein the impact absorbing composite intermediate comprises a plurality of first impact absorbing members, the first impact absorbing members formed in the first mold cavity portions, and adjacent first impact absorbing members are discrete and individually distinct from each other.

43. (Original) The method of claim 42 wherein:

the flexible layer has internal surfaces that define a plurality of holes in the flexible layer; the first impact absorbing members comprise the expanded polymeric resin; and the expanded polymeric resin of the first impact absorbing members extends into and is fixed within the holes of the flexible layer.

44. (Original) The method of claim 37 wherein the expanded polymeric resin comprises closed cell polymeric foam.

45. (Original) The method of claim 44 wherein the closed cell polymeric foam comprises polymeric material that is selected from the group consisting of polystyrene, polyethylene, polypropylene, and any combination of any of these.

46. (Previously Presented) The method of claim 37 wherein the impact absorbing composite comprises:
a plurality of first impact absorbing members attached to the flexible layer; and
a plurality of second impact absorbing members attached to the flexible layer, the first impact absorbing members and the second impact absorbing members attached to opposing sides of the flexible layer.

47. (Original) The method of claim 46 wherein the first impact absorbing members are free of voids.

48. (Original) The method of claim 46 wherein adjacent first impact absorbing members are discrete and individually distinct from each other.

49. (Original) The method of claim 46 wherein the first impact absorbing members are movable independently with respect to each other.

50. (Original) The method of claim 37 wherein the flexible layer comprises a net or open-meshed fabric.

51. (Original) The method of claim 37 wherein:
the impact absorbing composite intermediate comprises a plurality of first impact absorbing members, the first impact absorbing members formed in the first mold cavity portions; and
finishing the impact absorbing composite intermediate comprises:
removing excess expanded polymeric resin to form a plurality of second impact absorbing members, the first impact absorbing members and the second impact absorbing members located on opposing sides of the flexible layer.

52. (Previously Presented) The method of claim 51 wherein:

removing excess expanded polymeric resin means thermally cutting excess expanded polymeric resin, mechanically cutting or routing excess expanded polymeric resin, vaporizing excess expanded polymeric resin, or any of these in any combination.

53. to 73. (Canceled)

74. (Previously Presented) An impact absorbing composite, the impact absorbing composite comprising:

a plurality of impact absorbing members, the impact absorbing members being solid and predominantly free of voids; and

a flexible layer, the flexible layer comprising netting or open-meshed fabric, each impact absorbing member attached to the flexible layer.

75. (Previously Presented) An impact absorbing composite, the impact absorbing composite comprising:

a plurality of impact absorbing members, each impact absorbing member being solid and predominantly free of voids; and

a flexible layer, each impact absorbing member attached to the flexible layer, wherein:

adjacent impact absorbing members are in contact with each other; and

the majority of the impact absorbing members are surrounded by at least three adjacent impact absorbing members.

76. (Previously Presented) An impact absorbing composite, the impact absorbing composite comprising:

a plurality of first impact absorbing members, the first impact absorbing members being solid and predominantly free of voids;

a plurality of second impact absorbing members attached in working relation with the first impact absorbing members; and

a flexible layer, the first impact absorbing members attached to the flexible layer, wherein:

adjacent first impact absorbing members are in contact with each other; and

the first impact absorbing members and the second impact absorbing members are located on opposite sides of the flexible layer.

77. (Previously Presented) A method of making an impact absorbing composite, the method comprising:
attaching a plurality of impact absorbing members to a flexible layer, the impact absorbing members being solid and predominantly free of voids and the flexible layer comprising netting or open meshed fabric.
78. (Previously Presented) A method of making an impact absorbing composite, the method comprising:
attaching a plurality of impact absorbing members to a flexible layer, the impact absorbing members being solid and predominantly free of voids;
placing adjacent impact absorbing members in contact with each other, the majority of the impact absorbing members surrounded by at least three adjacent impact absorbing members.
79. (Previously Presented) A method of making an impact absorbing composite, the method comprising:
attaching a plurality of first impact absorbing members to a flexible layer, the first impact absorbing members being solid and predominantly free of voids and adjacent first impact absorbing members in contact with each other;
attaching a plurality of second impact absorbing members in working relation with the first impact absorbing members, the first impact absorbing members and the second impact absorbing members located on opposite sides of the flexible layer.
80. (New) The method of claim 42 wherein each impact absorbing member is directly attached to, and in contact with, the flexible layer.
81. (New) The method of claim 42 wherein the impact absorbing members and the flexible layer are formed of different materials.
82. (New) The method of claim 46 wherein each first impact absorbing member is directly attached to, and in contact with, the flexible layer.

83. (New) The method of claim 46 wherein the first impact absorbing members and the flexible layer are formed of different materials.
84. (New) The method of claim 46 wherein the flexible layer comprises a net or open-meshed fabric.
85. (New) The impact absorbing composite of claim 74 wherein each impact absorbing member is directly attached to, and in contact with, the flexible layer.
86. (New) The impact absorbing composite of claim 74 wherein the impact absorbing members and the flexible layer are formed of different materials.
87. (New) The impact absorbing composite of claim 75 wherein each impact absorbing member is directly attached to, and in contact with, the flexible layer.
88. (New) The impact absorbing composite of claim 75 wherein the impact absorbing members and the flexible layer are formed of different materials.
89. (New) The impact absorbing composite of claim 75 wherein the flexible layer comprises a net or open-meshed fabric.
90. (New) The impact absorbing composite of claim 76 wherein each first impact absorbing member is attached to, and in contact with, the flexible layer.
91. (New) The impact absorbing composite of claim 76 wherein the first impact absorbing members and the flexible layer are formed of different materials.
92. (New) The impact absorbing composite of claim 76 wherein the flexible layer comprises a net or open-meshed fabric.

93. (New) The method of claim 77 wherein each first impact absorbing member is attached to, and in contact with, the flexible layer.

94. (New) The method of claim 77 wherein the first impact absorbing members and the flexible layer are formed of different materials.

95. (New) The method of claim 78 wherein each impact absorbing member is attached to, and in contact with, the flexible layer.

96. (New) The method of claim 78 wherein the impact absorbing members and the flexible layer are formed of different materials.

97. (New) The method of claim 78 wherein the flexible layer comprises a net or open-meshed fabric.

98. (New) The method of claim 79 wherein each first impact absorbing member is attached to, and in contact with, the flexible layer.

99. (New) The method of claim 79 wherein the first impact absorbing members and the flexible layer are formed of different materials.

100. (New) The method of claim 79 wherein the flexible layer comprises a net or open-meshed fabric.